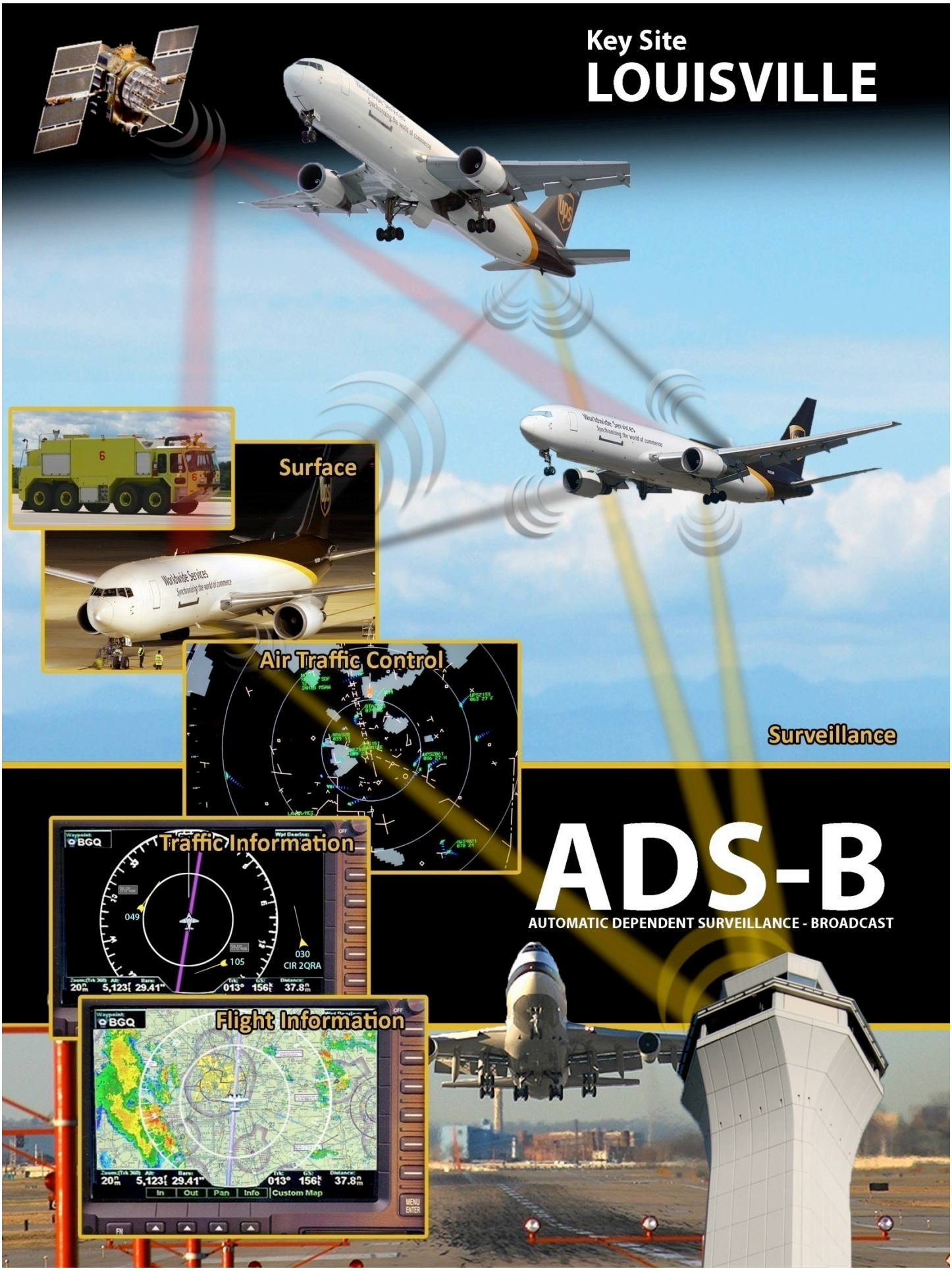
Key Site
LOUISVILLE
Surface
Air Traffic Control
Surveillance
Traffic Information
Flight Information
ADS-B
AUTOMATIC DEPENDENT SURVEILLANCE - BROADCAST

Louisville

Service Volume and Louisville Terminal Radar Approach Control and Air Traffic Control Tower Service Delivery Point

Infrastructure

- 2 ADS-B radio stations for terminal coverage
- 4 ADS-B radio stations for surface coverage of Louisville International Airport

Service Volumes

- Terminal service volume is 60nm radius around airport
  - –Floor of coverage based on Louisville's secondary surveillance radar coverage and minimum vectoring altitude; ceiling is 25,000 ft.
- Surface service volume is 5nm radius around airport
  - –Floor is surface movement area
  - –Ceiling is 200 ft. above ground level

Services

- Air traffic control separation services
  - ADS-B / ADS-R
- Flight Information Broadcast Services (FIS-B)
- Traffic Information Broadcast Services (TIS-B)
  - Terminal area will receive the TIS-B source from the secondary surveillance radar
  - Surface area will receive the TIS-B source from the Airport Surface Detection Equipment - Model X (ASDE-X)

Interface Protocols

- Asterix Category 33 for position data reports and Asterix Category 023 service status reports

Service Delivery

- Primary service delivery point
  - CARTS automation system at Louisville Terminal Radar Approach Control
- Other service delivery points
  - Indianapolis Center
  - Louisville Air Traffic Control Tower for ASDE-X
  - Surveillance and Broadcast Services monitor receives service status reports and equipment status reports, as well as ADS-B, TIS-B and FIS-B data
  - FAA monitoring at the William J. Hughes Technical Center and the Aeronautical Center
  - Service certification is at the service delivery point for each automation platform
  - Delivery of TIS-B and FIS-B to aircraft equipped with ADS-B avionics and a multi-function display
- Aircraft receiving TIS-B must be equipped with ADS-B 'Out' and 'In'; FIS-B requires ADS-B 'In'

Applications

- Air traffic control surveillance
- Enhanced visual acquisition
- Enhanced visual approaches
- Airline operations center merging and spacing
- Cockpit display of tactical information-assisted visual separation
- Final approach and runway occupancy
- Airport surface situational awareness (includes vehicles)
- Conflict detection
- Weather and NAS situational awareness

Benefits

- More efficient spacing on approach in visual meteorological conditions
- Continuation of visual approaches in marginal conditions
- Increased ability to perform continuous descent approaches (merging and spacing with surveillance data sent to airline operations center)
- FIS-B / TIS-B
  - Reduce risk of midair collisions
  - Reduce risk of weather-related accidents
  - More efficient routes in adverse weather
  - Improved situational awareness